

TUTTLE (A. H.)

TOTAL HYSTERECTOMY

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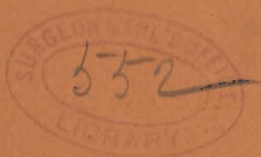
New Vagino-Abdominal Method.

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BY A NEW

VAGINO-ABDOMINAL METHOD.

ALBERT H. TUTTLE, S. B., M. D.,
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THOSE of you who have seen much of the work in total extirpation of the uterus, have watched the progress of the cases through convalescence, and have studied the after results, will, I believe, no longer express a doubt of the greater value of the total over the partial methods of hysterectomy, but will agree that the now important question for consideration is in regard to the method to be pursued and to the detail of operative finish. Owing to the variety of conditions for which the operation is indicated, and the great diversity of circumstances under which the operation is performed, no one method will entirely do away with all others, but improvements in the technique of any one will give it a wider range of usefulness, which must necessarily be at the expense of some other.

In determining the value of an

operation for total extirpation of the uterus, statistics of mortality, the principal items formally considered, are important, but now they cannot be entirely relied upon, because owing to the improvement in methods and the increasing skill of the operator death should be unusual, and depend much more on the disease and condition of the patient than the operation *per se*. The fatal cases should first be considered individually, noting their differences in strength and natural vitality, the variety and extent of the pathological conditions and complications, and the ability of their several operators to deal equally well with a given technique. They should then be compared with those nearest alike that have recovered in the same series, and again with like cases in the series of other operators.

Finally, we should reason *a priori*,



like the skilled mechanic who studies a problem set before him for the first time, noting the dangers and difficulties in each movement necessary to attain a given result, comparing the various means which the method offers for reducing the amount of technical skill necessary for the operator, and obviating the danger of injury to contiguous parts during the dissection, as well as furnishing the requirements of the patient's life, health and rapid convalescence, expressed in a short operation, little ether, diminished shock, etc.

It was after a careful consideration of these various circumstances, and a review of the advantages and disadvantages peculiar to the several techniques of vaginal and abdominal hysterectomy, that I have devised the following operative method, selecting the best parts in each other operation, avoiding so far as possible those attended by the greater difficulties, and meeting the new requirements by special means.* I have developed it by careful study of every case, slightly modifying the order of detail procedures, and now and then improving the instruments in such manner as to require the least possible time for their manipulation.

I have repeatedly put the method to a practical test under most trying circumstances, inviting the inspection and criticism of many members of our profession, and now, in the more

mature condition, it affords me pleasure to offer it for the consideration of this honorable body.

The vagino-abdominal method of hysterectomy is characterized by a division of the labor into two parts, vaginal and abdominal.

The *vaginal* part consists of:—

1. Sterilization of the cervix and vagina and their maintenance in this condition by closure of the uterine canal with a metal stem, which also serves as a guide and for attachment of an elevating staff.

2. Abcision of the vagino-uterine attachment, dissection of the cervix from the bladder in front and the peritoneum behind, and the packing of the cavity thus formed with gauze.

3. The closure of the vaginal vault from below.

(Items 1 and 2 are partly reversed in their order except in cases of cervical cancer.)

The *abdominal* part consists of:—

1. Opening of the abdomen by a median incision.

2. Ligaturing and section of the ovarian vessels and lateral folds of broad ligament.

3. Incision of the peritoneal covering of the uterus in front and behind, and its separation with the bladder to the lines of vaginal dissection.

4. Clamping of the uterine vessels, abcision and removal of the uterus.

5. Eversion of the flaps of peritoneum with the ovarian stumps, and closure of the lower abdominal opening with concealed sutures, the serous surfaces in contact.

6. Closure and hermetically sealing of the external abdominal wound.

The special instruments employed

* First communicated to the Gynecological Society of Boston in the early spring of 1894, and later presented in a paper at the June meeting of the Cambridge Medical Improvement Society ("Total Extirpation of the Uterus by a New Method."—Boston Medical and Surgical Journal, Oct. 18, 1894.)

in the operation are the uterine stems and the elevating staff.

The uterine stem is a device used to cork up the contents of the uterus, to give support and attachment to a staff, used for elevating the uterus, and to serve as a guide for determining the position and limits of the cervix. It consists of a cap to cover the cervix and a central stem that fits into the canal, the whole being cast and turned from one piece of metal. The cap is concave on one side and convex on the other, has a groove in the edge for a director, and a number of T shaped slots about the periphery for holding sutures. The central stem is smooth or has a thread cut upon it, which serves to hold the instrument into the uterus when it is not fastened with sutures. Perforating the stem for the depth of an inch is a conical shaped cavity, which receives the staff and holds it with a simple slip joint.

The staff is a steel rod bent on the curve of a prostatic catheter, except that the point is directed a little more outward and is made to fit the cavity of the stem.

Both instruments are inserted by the vagina, but the stem is removed with the uterus from the abdominal opening.

The details of the operation are as follows, viz. :—

PREPARATION OF THE PATIENT.

When the result of an examination determines for the first time the requirement of hysterectomy, the physical and constitutional condition of the patient are carefully noted, and unless they are favorable for an opera-

tion she is placed on tonic treatment and the heart-beat regulated. Especial attention is paid to the examination of the urine and kidneys, which almost always show some defect, and unless there is about the normal secretion of solid constituents operation is deferred.

If the uterus is enlarged and filled with soft cancerous or sarcomatous material, which for some time previously have been attended with exhausting discharges of a serous or bloody character, a preliminary thorough curettement, followed by rest in bed, will result in a very short time in the temporary improvement of the physical condition of the patient.

For a few days before the operation the patient is given a liquid diet and kept quiet in bed.

By packing the vagina daily for a week before the operation it will be stretched and softened considerably and give greater facility for the after manipulation.

The day before the operation the bowels are thoroughly cleared of all fecal matter and made less septic by the administration of ten grains of calomel in one dose, about noon, followed by teaspoonful doses of magnesium sulphate every hour until several movements have occurred.

The hair over the pubes is then shaved away, the patient given a warm bath, and scrubbed with soap, rinsed with bichloride solution (1-5000), which is allowed to dry on, dressed in sterilized clothing, and put to bed, with a bichloride pad over the abdomen, between sterilized bed clothing.

For supper is given a hot drink of malted milk or similar food. On the morning of and at least four hours before the operation rectal enemata of warm water are repeatedly given until the return is clear, then a vaginal douche of bichloride (1-1000). The lower limbs are clothed with woolen wraps, two ounces of whiskey and twenty minims of freshly prepared tincture of digitalis are administered by the rectum before the patient is taken to the operating room, and at the beginning of the operation $\frac{1}{4}$ grain morphine, $\frac{1}{150}$ grain atropia, and $\frac{1}{10}$ grain strychnia are given subcutaneously in one dose.

In order to avoid all unnecessary length to the period of anæsthesia the ether is not given until the preliminaries are nearly completed, and in the beginning is often substituted by the use of chloroform, either pure or in the form of the A C E mixture.

OPERATION.

A short speculum is introduced into the vagina and the perineum depressed. With the help of vaginal retractors the cervix is exposed to view and drawn as far as it will come into the introitus by means of tenacula forceps.

A probe is now passed and the direction, shape and size of the uterine canal determined.

Unless the canal is freely patent it is dilated with Wathen's instrument and treated with equal parts tincture iodine and carbolic acid, applied on a cotton stick. The excess of iodine, blood, etc., are irrigated away, and if the character of the disease is other

than cervical cancer the cervix is firmly held and a circular incision is made, simply cutting through the vaginal structures about the uterine neck, sufficiently remote from the uterus to include within it all diseased tissues, at the same time keeping as close as possible to the os, as in the usual manner of performing vaginal hysterectomy. In most cases this manœuvre is comparatively simple, but with a large tumor in a single woman somewhat advanced in age, with a rigid vagina, narrowed and elongated by long continued upward traction exerted by the uterus as it is forced out of the pelvis to seek room for the growing tumor, and with a cervix perhaps almost entirely "taken up" by the distension exercised by the new growth, or with a senile uterus firmly fixed by old adhesions in the upper region of the pelvis and nearly hidden from external inspection by the contraction of the vagina that occurs after a certain age, it is a matter of great difficulty and contrary to what might be expected, little help will be gained by incision of the sphincter vaginæ.

The uterus is now separated from its anterior and posterior attachments and coverings as freely as possible by means of the finger or the handle of a scalpel and then the cut margin of the vagina is caught with forceps and loosened sufficiently to allow it to be drawn together and sutured. A line of continuous suture is taken about one quarter of an inch from the cut margin, and is like the ordinary purse-string suture, except that the first stitch, which is placed at the back, is carried around the vaginal artery, the

suture drawn so as to leave both ends of even length in the vagina, the threads crossed, and then one side of stitches taken with one end and the other with the remaining end. In this manner the principal vessel is caught in a loop and when the ends of the suture are drawn tight, not only is the vault of the vagina closed in, but also any tendency to hæmorrhage from the vaginal artery is obviated.

A uterine stem is then selected according to the length of the cervix and size of the canal; with a soft uterus and large easily dilatable cervix, one with wide thread is used, but with a cirrhotic organ one with a fine thread (even smooth) is preferable.

The uterine stem is inserted and forced into place, after filling the cap with iodoform, either by simple pressure, or in case one with a thread is used by turning it up with a screw-driver, at the same time the cervix is held firmly by means of a pair of tenacula forceps fixed into the anterior and posterior lips.

If the case is one of cervical cancer the stem must be inserted before any incision is made, and the contents of the uterus and infective parts tightly sealed by sewing the vagina to the edge of the metal cap with sutures taken through normal vaginal structure, sufficiently remote from the cervix to include all diseased tissue. One should then proceed as above described for non-infective cases.

It is often advisable to tie a smooth stem into the cervix by means of one or more sutures to prevent slipping.

The staff is now inserted into the

central cavity of the uterine stem and held in place by an assistant; the parts sponged clean and dry; a tampon of iodoform gauze packed into Douglas' pouch, under the peritoneum and between the cervix and bladder; and the ends of the purse-string-like suture drawn tight and tied, closing in the vault of the vagina below the cervix, gauze and uterine stem, except for a small opening through which the staff passes. In exceptional cases, already mentioned, not only is this careful toilet of the vagina very difficult or impossible, but unnecessary and time-consuming, and should be omitted.

In these cases it is better to simply make a circular incision through the vagina, free the cervix and then pack hard the whole vaginal cavity with sterile gauze. This elevates the uterus, pushes the ureters further away to the sides of the pelvis, and serves as a guide during the dissection in the abdominal cavity. When this method is adopted the vault of the vagina can be closed in from the abdominal cavity.

The patient is now placed in position for abdominal section with means ready for obtaining the Trendelenberg posture. The usual incision is made, and of variable length to meet the requirements of the case. The peritoneal cavity is opened at the upper angle of the wound in order that the position of the bladder can be determined before the opening is completed and injury to it avoided. The incision is carried close to the pubes to gain as much room as possible for working in the pelvis.

The contents of the abdomen are

carefully inspected and the method of dissection determined.

If the case is a simple enlarged uterus with appendages approximately normal, the tumor is drawn out of the wound and to one side; the fold of broad ligament, including the tube and ovary of the other side, is put on the stretch and a row of sutures passed below the ovary, from close to the side of the uterus to the free margin of the ligament, so as to include the ovarian artery. This line of sutures is inserted by means of a perineal needle; is taken in the manner as a shoemaker's stitch, but each stitch — which includes but a small amount of tissue — is drawn tight, and secured by taking a turn of the loose end of the suture about the other, so as to form a series of single knots.

The uterus is then pulled over to the other side, and the remaining tube, ovary, vessel and ligament secured in same manner.

The ligaments are cut away above the ligatures, and between the points of their excision across the uterus in front and back about an inch above the attachment of the bladder anteriorly, and an inch above the cervix posteriorly the peritoneal covering of the womb is incised.

With the help of a scalpel handle, the bladder and peritoneum are now rapidly dissected up from the uterus in front until the line of former vaginal dissection is reached; the posterior layer of peritoneum is treated in the same manner; the sides of the uterus are freed from peritoneum as much as possible, when the lateral attachments, including

the uterine artery, can be easily clamped and the organ cut away and removed. In cutting away the uterus keep as close as possible to that organ.

During the dissection an assistant holds up the uterus firmly by means of the staff, which shortens and defines the neck and enables the operator to quickly and easily perform what is usually the most difficult part of the operation, the enucleation of the cervix. The gauze packing acts also as a guide and is of material assistance during this dissection.

The uterine vessels are firmly ligatured with kangaroo tendon, the clamps removed, and all oozing of blood from the pedicles stopped by suturing.

The anterior and posterior peritoneal flaps are brought together; the cut edges are turned in so as to bring the serous surfaces into contact, and the stumps containing the ovarian arteries are folded in at the angles so as to become extra-peritoneal, the whole being closely united by a line of blind sutures, which when drawn tight are situated outside of the peritoneal cavity. All clots are removed by dry sponging, the abdominal wound closed layer by layer with animal ligature, and finally sealed with cotton and collodion.

Although ordinarily it is preferable to remove the ovaries, should one or both be found firmly bound down by old adhesions and in the condition of a small hard mass, it is better to leave them *in situ* than to delay the operation by such time as is necessary for their removal. They will as a rule give rise to no further

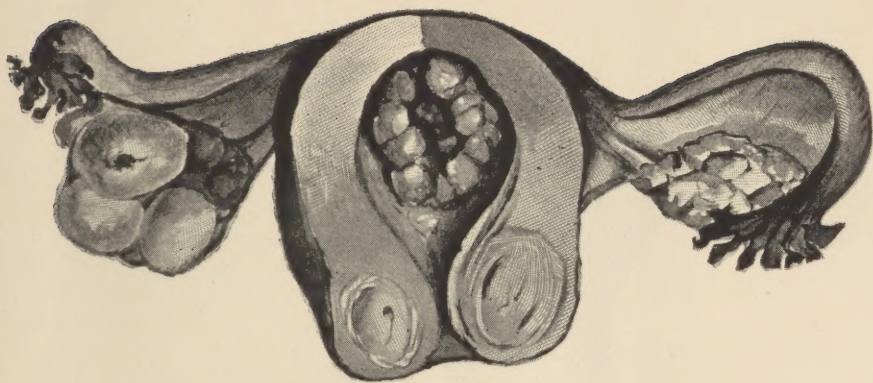


FIG. I.

Sarcoma of Uterus; Multiple Fibroids; L. Ovary Cystic; Enlarged Tubes. See page 8.

Diameter 22-31 of original.

Drawn from nature by author.

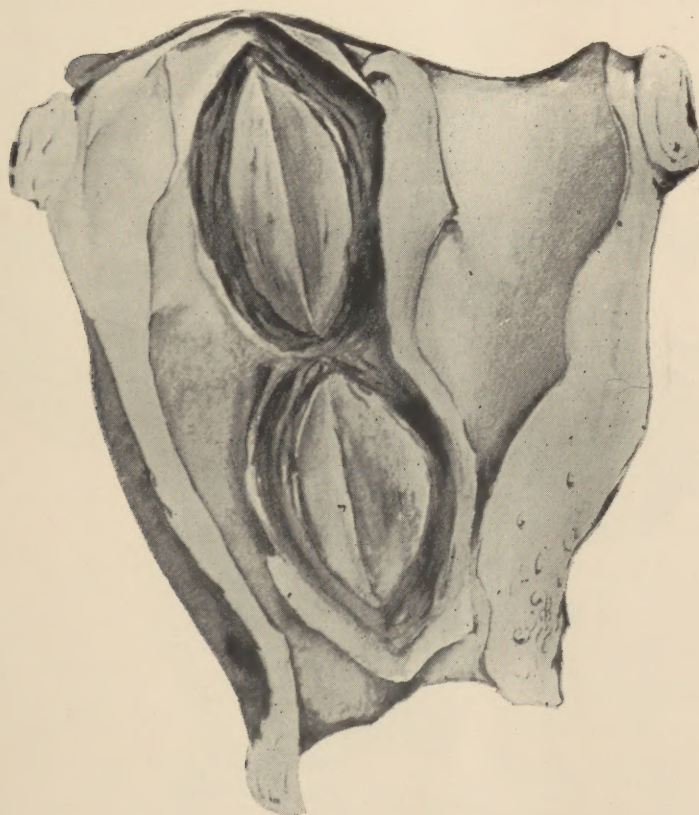


FIG. II.

Multiple Interstitial Fibroids. See page 9.

Natural size.

Drawn from nature by author.



FIG. III.

Fibro-cystic Disease of both Ovaries; Enlarged Uterus. See page 9.

Diameter 22-41 of original.

Drawn from nature by author.



FIG. IV.

Fibro-myoma Uterus; R. Ovary Fibro-cystic. See page 10.

Diameter 21-41 of original.

Drawn from nature by author.



FIG. V.

Uterine Myomata. See page 10,
Diameter 33.52 of original. Drawn from nature by author.



FIG. VI.

Uterine Myomata. See page 11.

Diameter 32-47 of original. Drawn from nature by author.

symptoms, as has been repeatedly demonstrated by vaginal hysterectomy, where often they must necessarily be left behind.

When a large multiple fibroid mass is encountered, the topography of the parts must be carefully studied and the position of the bladder and (if possible) the ureters determined. If the growth forms with the uterus a single tumor, the same direction for operating as above described hold good, but where there are several distinct tumors, which are sessile in attachment and appear to have a very large pedicle, a sufficiently long cross incision is made through the peritoneal covering and each tumor is enucleated as far as possible. By this means the pedicle will usually be found much smaller than expected, forming a part of the uterine attachment, and easily included in the clamp employed for securing the uterine vessels of the same side. Care must be taken in cutting and dissecting back of the peritoneal covering not to tear or injure the ureter, the position of which cannot always be recognized. If it is determined passing over the tumor it should be dissected up and carried to one side with the overlying flap of peritoneum, but if it cannot be distinguished any and all tissue which resembles it should be treated in the same manner, and as the clamps are applied prior to the final abscision, bear in mind the watchword of this operation, "*stick close to the uterus.*"

If, upon opening the abdomen, bladder, omentum, bowels, uterus, tubes and ovaries, present as a confused and conglomerated mass, firmly

bound together by adhesions, the uterus can still be removed subperitoneally, as follows: A point is selected on the fundus of the uterus that is not obscured by adherent viscera, and a small cross incision made through the peritoneal covering. The edges can then be picked up with forceps; the opening intelligently enlarged, without injury to the adherent organs; and the peritoneum dissected from the uterus in every direction, well down on the sides and sufficiently to admit of the easy adjustment of the clamps. The organ is cut away, the vessels secured and the opening in the peritoneum closed as before, leaving the tubes and pelvis to drain per vaginum. In other words the uterus is removed by the combined method, with the same consideration for its surroundings which the French operators have when they extirpate by the vaginal method.

After the operation, shock is combated with saline rectal injections, strychnine, morphine, atrophine, caffeine, digitalis, nitro-glycerine, etc., as the case may require.

The advantages of the vagino-abdominal method are:—

Over the vaginal method, simply:—

1. The peritoneal cavity is completely closed and left with no raw surface for subsequent adhesion with viscera.

2. Primary union is the rule and convalescence rapid.

3. The subsequent complication of rectocele or vesicocele is avoided.

4. The uterine vessels in all cases can be perfectly secured and there is no danger of secondary hæmorrhage.

5. Pus tubes and ovaries are more completely removed.

Over the abdominal methods:—

1. Complete sub-peritoneal drainage can be established.

2. The length of time which the peritoneal cavity is exposed is greatly reduced by the previous vaginal dissection, and shock is consequently diminished. (A large uterus can be removed in from twenty to thirty minutes.)

3. The limits of the cervix are closely defined and the necessary extent of the dissection readily determined.

4. The asepsis is more complete and there is less danger of subsequent infection.

Over both:—

1. The dangers of hernia are reduced; vaginal over the vaginal method, ventral over the extra-peritoneal treatment of a constricted stump.

2. Danger of injury to the ureters is avoided.

3. The manipulation is easier in the most difficult parts of other operations.

4. There is less danger of injury to the bladder and other viscera.

5. Hæmorrhage from the vaginal artery is avoided.

6. The operation is practically bloodless.

7. It offers a means for removing large uterine tumors with extensive adhesions which could only be done with great difficulty or not at all by the other methods.

8. Its greater perfection of the principles of modern aseptic surgery.

Appended is a report of six cases, all

of which made an excellent recovery.

CASE I.—Sarcoma of uterus.

Vagino-abdominal hysterectomy. Recovery. Family physician, Dr. E. de la Granja. Mrs. L. W., nullipara, several miscarriages, married; first seen Feb. 18, 1894. Age sixty years. Housewife. Family history not ascertained. Previous history: good health until a few months ago; tumor detected a year ago; later, watery and bloody discharges, progressive weakness, emaciation, attack of la grippe, circumscribed peritonitis, and distress with pressure symptoms. Previous treatment with ergot and tonics. Present condition extremely weak and nervous, tumor reaching to umbilicus, bloody and watery discharges, emaciated, frequent attacks of pain, insomnia, requires much opium. Physical examination: enlarged uterus, short cervix, long, narrow and rigid vagina, clean os, sound passes four and one-half inches, lungs, heart and kidneys normal; urine low; specific gravity, 1.015; no albumen. Preliminary treatment: removal of nearly a quart of soft, friable sarcomatous tissue by curetting in two sittings; the second necessitated as the great loss of blood and feeble condition of the patient during the first attempt would not admit of it being finished. Tonics and stimulants. Curettings February 12 and March 17. Operation of hysterectomy April 10, 1894. The patient made a good recovery, enjoyed fair health during the summer and moved out of town, thus passing out of my hands. I learned that she died with symptoms of renal disease during the early winter.

CASE II.—Multinodular fibroid uterus. Vagino-abdominal hysterectomy. Family physician, Dr. F. C. Osman of Dorchester, Mass. Mrs. S., married, prima para, no miscarriages, first seen April, 1894. Age forty-two years. Housewife. Family history negative. Previous history: a slowly developing tumor of the right broad ligament, cystic, causing such disturbance that its removal was advised and performed by Dr. William T. Lusk six years previous, and at the same time both ovaries were also removed. Small multiple fibroids had been recognized before, and the diagnosis was verified at the time of operation. The health improved; but there was constant pain, discomfort and disability up to the present time, with swelling of the left leg, of recent origin. She had received various anodyne, stimulating, tonic and local treatment without much benefit. Perineorrhaphy seven years ago. At the time of operation she was pale, emaciated, feeble, but of a cheerful and hopeful mind. Good steady pulse, and no evidence of renal disease. Menstruation (metrorrhagia) regular to time of hysterectomy. Physical examination showed an enlarged uterus, nodular, and lying back against the promotory, and somewhat low in the pelvis. The os was clean, the canal four inches deep, and there was nothing peculiar about the vagina. Operation for hysterectomy was performed May 1, 1894. The details of the operation were carried out carefully in every particular according to my previous description. There was no appreciable shock, and the patient made a

complete recovery, and has since been perfectly free from pelvic pain and discomfort, although she still suffers from some cystitis. Urine, 1.031; no albumen or sugar.

CASE III.—Fibro-cystic disease of both ovaries, enlarged uterus, vagino-abdominal hysterectomy. Recovery. Family physician, Rich. Hogner, Boston, Mass. Mrs. N. O., married, nullipara, no miscarriages; first seen August, 1894. Age twenty-nine years. Housewife. Family history shows a sister, two-para, about forty years old, who died in June, 1893, from sarcoma-cystica-ovariorum. Previous history: for several years she has suffered from excessive and long continued menses, occurring about every two weeks. Last May, after heavy lifting, she had an attack of pelvic peritonitis, with metrorrhagia so extensive as to threaten the patient's life, complicated with slight nephritis and acute endocarditis, as well as embolic pneumonia. For a year and a half menstruation had been regular, except for two periods. Previous treatment consisted of gynæcological kinesitherapy according to the method of Thure Brandt, and Swedish medical gymnastics. Her condition at the time of operation was excellent as far as the general health was concerned. Examination showed a tumor reaching nearly to the umbilicus and closely connected with the uterus. The fundus could not be determined. The urine was normal. The cervix was normal, uterine canal four and one-half inches and vagina roomy. Operation Sept. 11, 1894, was unusually long, owing to numerous ad-

lesions. Very little shock followed; the urine of the first ten hours was smoky and albuminous. Recovery was perfect, and the patient has remained well since.

CASE IV. — General interstitial fibroid uterus, sub-mucous fibroid, ovarian fibro-cystic tumor on the right side. Vagino-abdominal hysterectomy; recovery. Family physician, Dr. Mary E. Bates, Boston, Mass. Miss E. A., single, nullipara, no miscarriages; first seen April, 1894. Age forty-three years. School teacher. Family history; mother has suffered for years with an abdominal growth; sister and brother well. Previous history: dysmenorrhœa from childhood, steadily growing more severe, and especially during the past ten years. Ten years ago it was claimed that she had a misplacement of the uterus, and a ring pessary was worn for several months with relief of symptoms. For several years she has had flatulent dyspepsia and headache occasionally. Five years ago she was curetted by Dr. Marcy. For several years menstruation has been nearly every two weeks, and very profuse. A watery discharge has been noticed most of the time, and required the constant wearing of a napkin for two years. Extremely feeble and exhausted on slight exertion, although well nourished. Pallor and discoloration of the skin. Heart, lungs and kidneys normal. Uterus considerably enlarged, cavity four and one half inches deep, tender: os clean. Vagina somewhat close, right ovary painful to pressure. Urine normal. Preliminary treatment by curetting in May, 1894, rest in bed,

tonics, and sent to the seashore for the summer. Came back with increased tone and weight, but incapable of work. Operation Oct. 25, 1894. Primary union of parts, but some bladder catarrh followed, with occipito-cervical neuralgia. Steady improvement from the beginning, and she resumed her occupation as teacher April 1, 1895.

CASE V. — Large uterine myomata, vagino-abdominal hysterectomy; recovery. Family physician, Dr. John E. Somers, Cambridge, Mass. Miss M. R. Nullipara, no miscarriages, single. First seen December, 1894. Age thirty-two years. Domestic. Family history: both parents living; of thirteen children one sister died from uterine tumor, and two others in confinement. Previous history: excellent health until the summer of 1893, when a hard bunch, at first pulsating, but not later, was discovered in the lower abdomen. It was not tender to touch, and did not increase in size for a year. Menorrhagia was severe after the tumor appeared, requiring two dozen napkins at a period. It was painless. There was some leucorrhea, but not enough to require the wearing of a napkin. Previous treatment with tonics. At the time of operation she was pale and cachectic looking, with a doughy condition of the face. The heart was irregular, and there was an indistinct systolic murmur. The urine had a specific gravity, 1.020; no albumen, but many squamous and pavement epithelial cells with some mucous. She was well nourished and without evidence of emaciation. The uterus reached above the umbilicus,

was symmetrically enlarged with a cavity six inches deep, and a clean os. The vagina was roomy. Operation Jan. 17, 1895. While on the table the patient was at times considerably cyanosed and the pulse could not be determined. She reacted well, however, and made a rapid convalescence with primary union. After the operation the urine showed traces of albumen, and some hyaline casts. The mind gave indications of impairment, but there is improvement in this particular.

CASE VI.—Large uterine myomata, vagino-abdominal hysterectomy; recovery. Family physician, Dr. J. E. Somers, Cambridge, Mass. Miss L. B. A. Nullipara, no miscarriages, single. First seen December, 1894. Aged thirty-seven years, school teacher. Habit of taking long walks. Family history negative. Previous history: well until the summer of 1891, when after a long and fatiguing walk on a very hot day, menstruation occurred a week before it was due. After this event, frequent and profuse metrorrhagia followed, and continued at irregular intervals to the date of operation. In the Fall of 1893 and Spring of 1894, attacks of hæmorrhage were especially severe. In January, 1894, phlebitis occurred in both legs and confined her to bed several weeks. The tumor was first discovered in June, 1894, and in the Fall of the same year a watery discharge from the uterus

appeared, so profuse as to necessitate the use of a napkin constantly. Previous treatment of tonics and electricity since July, 1894, relieved to a certain extent the exhausting hæmorrhage. Present condition fairly good, pallor being the worst symptom. Some œdema of the limbs, the urine increased in quantity, with a specific gravity 1.015. Solids normal in amount. Heart, lungs, and kidneys were free from disease. Uterus symmetrically enlarged, reaching above the umbilicus, cervix short and "taken up" high in the pelvis. Os clean, vagina long and narrow. Sound passes nearly five inches. Operation March 7, 1895. A stem could not be inserted, and after freeing the uterus from the vagina the parts were packed with gauze and the operation finished in the usual way through the abdomen. Twenty-five minutes only was consumed in making the incision and removing the uterus, and the toilette of the peritoneum and closure of incision was finished in the same time. The patient rallied quickly from the operation and made an excellent recovery. This was the first case that I had been obliged to leave the vagina open above, and although the recovery was as complete as the others, a daily variation of one to two degrees of temperature, and slight vaginal discharge, showed the cavity at the vault of the vagina healed by second intention with granulation.

